

New York State Department of Transportation

Yellow Flag NB22CTW002

By: Rehan Afridi

Flag Date: March 16, 2022

Superseding Information:

This flag supersedes: YF NB2158W021

Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.

Date: March 16, 2022 10:00:00 AM

Of: NYSDOT Region 11

Signature Information

Signature: Rehan Afridi, P.E. 075185

Date: April 01, 2022

Reviewed By: Robert Kemp

Date: April 01, 2022

Attachments: 5

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 123			
	PR831 - Steel Beam End	34	each
	107 - Steel Open Girder/Beam	781	ft

Flagged Condition Description

This Yellow Flag NB22CTW002 supersedes previously issued Yellow Flag NB2158W021.

Location: Span 123 Girder G10 at Pier 122

Description: The end of Girder G10 in Span 123 at Pier 122 exhibits severe corrosion resulting in an overall web bearing area section loss of approximately 44% (previously 52%) and an overall shear web area section loss of approximately 38% (previously 43%) with an overall localized section loss of approximately 57% (previously 70%) for 5"L x 4"H area directly above the bearing below the guide angle (Photos 2 and 3). Also, the lower web of the girder adjacent to the web bearing area exhibits average section loss up to 30% (no change) for 36"L x 3"H above the bottom flange. (Refer to sketch for more details).

This girder is located above an expansion bearing.

Notes:

- 1.Girder G10 bottom flange exhibits up to 30% section loss for the full width of the bottom flange for a 12" length in front of the bearing. The condition is the same as reported in the last inspection.
- 2.The adjacent Girder G9 exhibits 35% localized section loss in the lower web above the bearing area with up to 25% section loss in the lower web above the bottom flange adjacent to the bearing for 3'L x up to 4"H area. The condition is the same as reported in the last inspection.
- 3.The adjacent Girder G11 has previously installed steel reinforcement plates and angles at the end of the Girder.
- 4.The flagged condition is located above the intersection of 47th Street and 3rd Avenue and was accessed using 30ft bucket truck with single lane closure.

Flag Photographs

Photo Number: 1

Photo Filename: Photo 1-RA_601-0085-edited.jpg



Attachment Description: General view of the flagged condition at Girder G10 in Span 123 at Pier 122. Looking Begin.

Photo Number: 2

Photo Filename: Photo 2-RA_601-0099.JPG



Attachment Description: The left face of Girder G10 in Span 123 at Pier 122. The end of the girder exhibits severe section loss at the lower web above the bearing and web adjacent to the guide angle with section loss at the bottom flange. Looking Right.

Photo Number: 3

Photo Filename: Photo 3-RA_601-0093.JPG



Attachment Description: The right face of Girder G10 in Span 123 at Pier 122. The end of the girder exhibits severe section loss at the lower web above the bearing and web adjacent to the guide angle. Looking Left.

Photo Number: 4

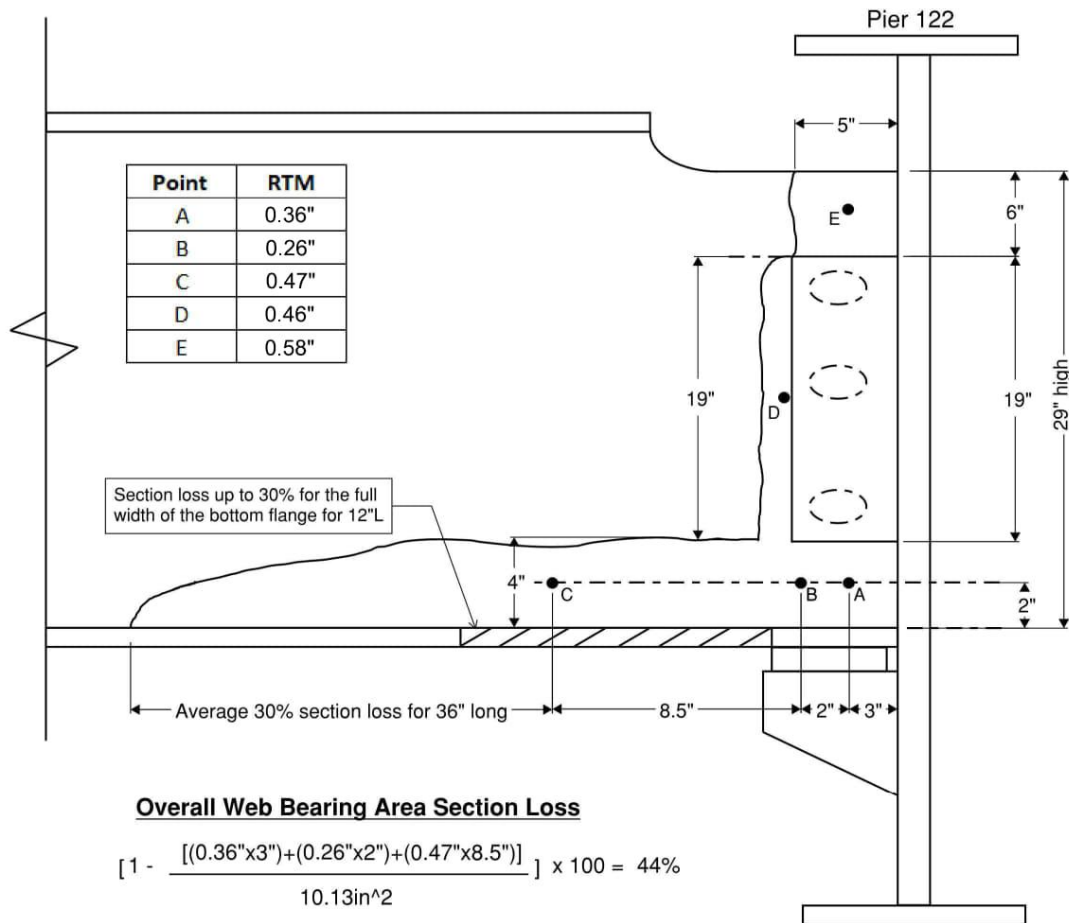
Photo Filename: 22YF_Span 123_G10 Sketch Rev. 03.31.jpg

Left Face of Girder G10 Sketch in Span 123 at Pier 122

N.T.S.

DATE 03/16/2022

TEAM LEADER Rehan Afridi, P.E. ASSISTANT TEAM LEADER Marcos Perez

**Overall Web Bearing Area Section Loss**

$$\left[1 - \frac{[(0.36" \times 3") + (0.26" \times 2") + (0.47" \times 8.5")]}{10.13 \text{ in}^2} \right] \times 100 = 44\%$$

Overall Shear Web Area Section Loss

$$\left[1 - \frac{[(0.31" \times 4") + (0.46" \times 19") + (0.58" \times 6")]}{21.75 \text{ in}^2} \right] \times 100 = 38\%$$

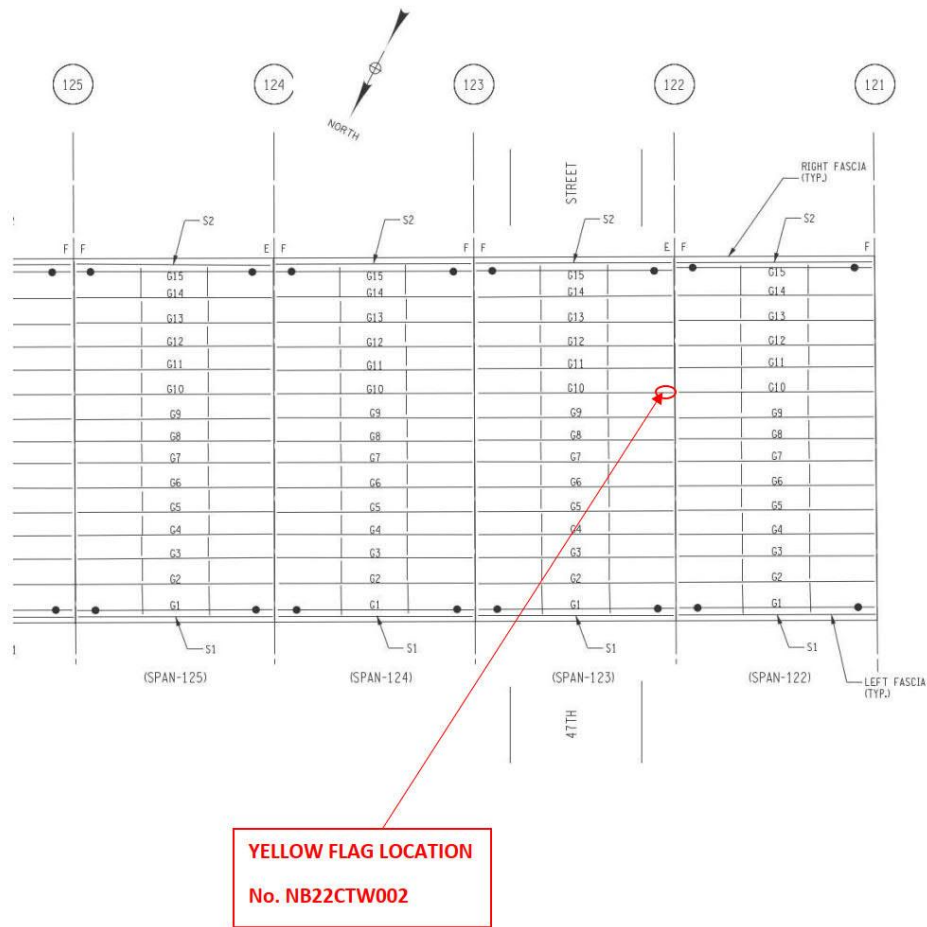
Notes:

- As-built web thickness = 0.75"
- Length of bearing area = 18 x web thickness = 18 x 0.75" = 13.50"
- Overall bearing area = 13.50" x 0.75" = 10.13 in²
- As-built shearing web area = 29" x 0.75" = 21.75 in²
- Adjacent Girder G9 exhibits 35% localized section loss in the lower web above the bearing area with 25% section in the lower web above the bottom flange adjacent to bearing for 4'L x up to 3"H.
- Adjacent Girder G11 has previously installed steel reinforcement plate and angle at the end of the girder.

Attachment Description: YF SN 123 G10 Sketch

Photo Number: 5

Photo Filename: YF NB22CTW002 Framing Plan.jpg



Attachment Description: YF SN 123 G10 Framing Plan